

REMARKS

Claims 1-9 are all the claims pending in the application.

Allowable Subject Matter

Applicants thank the Examiner for indicating the allowability of claims 6-8.

Claim Rejections 35 U.S.C. § 103(a)

The Examiner rejected claims 1-5 and 9 as being unpatentable over Oda (US 6,448,557) in view of Cole et al. (US 6,046,485; "Cole"). Applicants traverse this rejection as follows.

The Examiner alleges that Oda discloses most of the features recited in the rejected claims, but concedes that Oda fails to teach or suggest, a protective film 10 greater in thickness than the dielectric protective film 8 in a direction perpendicular to the substrate. To remedy this deficiency, the Examiner applies Cole, alleging that it teaches an infrared detector having beams wherein each beam has a thickness greater than the dielectric protective film of the infrared detecting portion.

In the Response to Arguments section, the Examiner clarifies the rejection alleging that Cole discloses in figure 4 a beam comprising wire 48 and dielectric layer 64, larger in thickness than the infrared detecting portion 58. Additionally, the Examiner notes that figure 4 also discloses the conductive wire 4 surrounded by a dielectric layer 64 larger in size than the dielectric protective layer 64 of the infrared detecting portion 58.

Claims 1, 4 and 5

Applicants respectfully submit that neither Oda nor Cole, either alone or in combination, teach or suggest, wherein the beam is greater in thickness than the entire infrared detecting portion in a direction perpendicular to a surface of the infrared detecting portion, as recited in claims 1, 4 and 5.

With regard to claim 1, Applicants submit that Cole teaches a portion of the microstructure pixel 10, which includes a protective layer 27 surrounding a resistive area 26 disposed on the absorber layer 29, that is at least of equal thickness as compared with the supporting element 28. Moreover, this portion of the microstructure pixel 10 above this absorber layer 29 appears to exhibit a thickness greater than the supporting element 28, at this position. (See FIG. 2). Similarly, in another embodiment, the thickness of the microstructure pixel of FIG. 4 where protective layer 64 lies above absorber layer 65 is of an equal thickness to the supporting element comprising resistive leg 46 and protective layer 64. (FIG. 4). Therefore, Cole fails to teach or suggest a beam having a thickness greater than the entire infrared detecting portion in a direction perpendicular to a surface of the infrared detecting portion.

Thus, Applicants respectfully submit that claims 1, 4 and 5 are allowable over the applied combination. Additionally, Applicants submit that claims 2 and 3 are allowable, at least because of their dependency.

Claim 9

Regarding claim 9, Applicants respectfully submit that neither Oda nor Cole, either alone or in combination, teach or suggest “forming a third dielectric protective film throughout an entire surface of an exposed part of the second dielectric protective film except a part of the heat detecting material thin film,” as recited in claim 9.

The Examiner alleges that this feature is taught citing column 16, line 41 of Oda. However, Oda describes that this dielectric film 37 is the third material film by a plasma CVD method. (col. 14, lines 41-43). Thus, correctly interpreted in light of the full disclosure of Oda, this is the third film deposited by a CVD method, not the third dielectric protective film formed. In fact, this dielectric film 37 corresponds to the fourth dielectric film formed.

As disclosed by Oda, the third dielectric protective film formed is dielectric protective film 33, as first dielectric protective film 3 and dielectric protective film 32 were the only dielectric protective films previously formed. (See FIG. 12 E and 12 H, col. 15, lines 3-5, lines 26-30 and 50-55). Furthermore, while Oda discloses a third protective dielectric film being formed, this film is formed “over the entire surfaces of both thermistor-bolometer thin film 7 and dielectric protective film 32.” (*Id.*). Thus, the feature “except a part of the heat detecting material thin film,” is not met by Oda, which discloses this film formed over the entire heat detecting material thin film. Additionally, Cole fails to teach or suggest such a feature.

Thus, Applicants respectfully submit that claim 9 is allowable over the applied combination.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

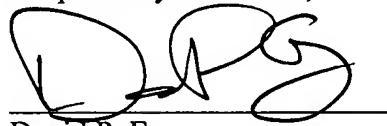
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CUSTOMER NUMBER

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. P. Emery', written over a horizontal line.

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Date: September 15, 2006